

## CHAPTER 8

### CONSTRUCTION DRAINAGE

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#### 8-1. General.

Proper consideration of drainage during construction can frequently prevent costly delays and future failures. Delays can occur not only because of damaged or washed-out facilities but because of shut-down resulting from environmental considerations. Proper construction drainage is critical to efficient and timely completion of earthwork.

#### 8-2. Planning.

Efforts to control delays or damages caused by construction drainage must begin in the planning stage and carry through design and construction. Guide specifications have been developed by Division offices, but it is impractical to prescribe fixed rules to cover all eventualities. Protective measures cannot generally be reduced to biddable contract items.

#### 8-3. Environmental degradation.

Every construction activity can create environmental impacts to some degree. Although the effects are usually temporary, it is important to minimize damage by anticipating problems and applying protective standards of performance.

#### 8-4. Protective measures.

Control of runoff problems during construction can be costly. Consideration of the following items will

aid in maintaining satisfactory drainage during the construction period.

*a.* Maximum use will be made of existing ditches and drainage features. Where possible, grading operations will proceed downhill, both for economic grading and to use natural drainage to the greatest extent.

*b.* Temporary ditches will be required to facilitate construction drainage. A particular effort will be made to drain pavement subgrade excavations and base courses to prevent detrimental saturation. Careful considerations will be given to the drainage of all construction roads, equipment areas, borrow pits, and waste areas.

*c.* Temporary retention structures will be required in areas where open excavation can lead to excessive erosion or discharge of turbid water to local streams.

*d.* Random excavation will be held to a minimum, and finished surfaces will be sodded or seeded immediately.

*e.* Installation of final storm drain facilities and backfilling operations will be planned and timed to render maximum use during the construction period.